



# WPDES PERMIT

*STATE OF WISCONSIN*  
*DEPARTMENT OF NATURAL RESOURCES*  
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE  
ELIMINATION SYSTEM**

**WRR Environmental Services Co Inc**

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility  
located at  
5200 Ryder Rd, Eau Claire, WI  
to

**The Groundwaters of the Lowes and Rock Creek Watershed of the Lower Chippewa River Basin in Eau Claire  
County**

in accordance with the effluent limitations, monitoring requirements and other conditions set  
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources  
For the Secretary

By \_\_\_\_\_  
Jason Knutson, P.E.  
Wastewater Section Chief

\_\_\_\_\_  
Date Permit Signed/Issued

**PERMIT TERM: EFFECTIVE DATE – August 01, 2023**

**EXPIRATION DATE – July 31, 2028**

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# 1 Land Treatment Requirements

## 1.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Description/Sample Contents and Treatment Description (as applicable)
002	Representative samples shall be collected prior to discharge to the absorption pond. Discharge is limited to cooling water bleed-off, boiler blowdown, water softener flush, groundwater extraction, and stormwater.

## 1.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

### 1.2.1 Sampling Point (Outfall) 002 - DISCHARGE TO ABSORPTION POND, Absorption Pond (Seepage Cell)

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
1,1-Dichloro- ethane	Monthly Avg	467.5 µg/L	Quarterly	Grab	
1,2-Dichloro- ethane	Monthly Avg	2.75 µg/L	Quarterly	Grab	
1,1-Dichloro-ethylene	Monthly Avg	3.85 µg/L	Quarterly	Grab	
1,2-cis Dichloroethene	Monthly Avg	38.5 µg/L	Quarterly	Grab	
1,2-trans Dichloroethylene	Monthly Avg	60 µg/L	Quarterly	Grab	
1,2-Dichloro-benzene	Monthly Avg	330 µg/L	Quarterly	Grab	
1,3-Dichloro-benzene	Monthly Avg	360 µg/L	Quarterly	Grab	
1,4-Dichloro-benzene	Monthly Avg	45 µg/L	Quarterly	Grab	
Carbon tetrachloride	Monthly Avg	2.75 µg/L	Quarterly	Grab	
Chloroethane	Monthly Avg	240 µg/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Chloroform	Monthly Avg	3.3 µg/L	Quarterly	Grab	
Chloromethane	Monthly Avg	16.5 µg/L	2/Month	Grab	
Methylene chloride	Monthly Avg	2.75 µg/L	2/Month	Grab	
1,1,1,2-Tetrachloro-ethane	Monthly Avg	38.5 µg/L	Quarterly	Grab	
1,1,2,2-Tetrachloro-ethane	Monthly Avg	0.11 µg/L	Quarterly	Grab	
Tetrachloroethylene	Monthly Avg	2.75 µg/L	Quarterly	Grab	
1,1,1-Trichloro-ethane	Monthly Avg	120 µg/L	Quarterly	Grab	
1,1,2-Trichloro-ethane	Monthly Avg	2.75 µg/L	Quarterly	Grab	
Trichloro- ethylene	Monthly Avg	2.75 µg/L	Quarterly	Grab	
1,2,4-Trichloro-benzene	Monthly Avg	42 µg/L	Quarterly	Grab	
Methyl ethyl ketone (MEK)	Monthly Avg	800 µg/L	2/Month	Grab	
Methyl isobutyl ketone (MIBK)	Monthly Avg	275 µg/L	2/Month	Grab	
Acetone	Monthly Avg	1.8 mg/L	2/Month	Grab	
Vinyl chloride	Monthly Avg	0.11 µg/L	Quarterly	Grab	
Benzene	Monthly Avg	2.75 µg/L	Quarterly	Grab	
Toluene	Monthly Avg	480 µg/L	Quarterly	Grab	
Xylene	Monthly Avg	1.5 mg/L	Quarterly	Grab	
Ethylbenzene	Monthly Avg	420 µg/L	Quarterly	Grab	
Trimethylbenzenes	Monthly Avg	288 µg/L	Quarterly	Grab	
Methyl tert-butyl ether (MTBE)	Monthly Avg	36 µg/L	Quarterly	Grab	
PFAS		ng/L	Quarterly	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Section below for more information.

**Daily Log – Monitoring Requirements and Limitations**

All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under “Records Retention” in the Standard Requirements section, and if requested, made available to the Department.

Parameters	Limit	Units	Sample Frequency	Sample Type
Cells Being Loaded	-	Cell Number	Daily	Log
Start to End Time	-	Date, Hour	Daily	Log

**Annual Report – Monitoring Requirements and Limitations**

The Annual Report is due by January 31<sup>st</sup> of each year for the previous calendar year.

Parameters	Limit	Units	Sample Frequency	Sample Type
Total Volume Per Cell	-	Gallons	Annual	Total Annual
Total Nitrogen per Cell	-	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Cell	-	Pounds/Acre/Year	Annual	Calculated

**1.2.1.1 PFAS (Per- and Polyfluoroalkyl Substances) Monitoring**

The permittee shall sample Outfall 002 for the PFAS identified in the department’s PFAS Update-Default Reporting List for Sampling and Analysis Requirements and Expectations (current version at the time of permit reissuance dated March 1, 2021).

## 2 Groundwater Requirements

### 2.1 Monitoring Requirements and Limitations

#### 2.1.1 Groundwater Monitoring System for Seepage Area

**Location of Monitoring System:** Vicinity of WRR's infiltration area for treated effluent

**Wells to be Monitored:** W-1 (801), W-1A (802), W-18 (803), W-18A (804), W-29 (809), W-19R (810), MW-116 (811), MW-101 (812), MW-26 (813)

**Well Used To Calculate Preventive Action Limits (PALs):** None. Groundwater standards for the monitoring wells are taken from s. NR 140.10, Table 1.

Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Point of Standards Application Well(s):** MW-116 (811), W-19R (810), W-29 (809), W-18A (804), W-18 (803)

Enforcement standards are to be met in groundwater located beyond the 250 foot design management zone, or beyond the property boundary, whichever is closer to the land treatment system. See the Standard Requirements section of this permit for additional conditions related to exceedance of groundwater standards.

**Required Monitoring:** Permittee shall monitor for the parameters listed below during the second quarter (April-June) of each year. Whenever groundwater monitoring shows that 50% of the Enforcement Standard is exceeded for any of the following parameters: Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, at any of the downgradient wells (MW-18 (803), MW-18A (804), & MW-29 (809)) the permittee shall conduct additional quarterly sampling on the well(s) where the exceedance occurred. Quarterly sampling shall continue until the levels drop below 50% of the enforcement standard for two consecutive quarters. Additional sample results shall be submitted quarterly by the 15th day of the month following the quarter. Also see the Schedules Section for more information & requirements. New or replacement wells shall be monitored monthly for the first three months after construction and at the schedule described above.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Depth To Groundwater	feet	*****	N/A	Annual
Groundwater Elevation	feet MSL	*****	N/A	Annual
1,1-Dichloro- ethane	µg/L	85	850	Annual
1,2-Dichloro- ethane	µg/L	0.5	5.0	Annual
1,1-Dichloro- ethylene	µg/L	0.7	7.0	Annual
1,2-cis Dichloroethene	µg/L	7.0	70	Annual
1,2-trans Dichloroethylene	µg/L	20	100	Annual
1,2-Dichloro- benzene	µg/L	60	600	Annual
1,3-Dichloro- benzene	µg/L	120	600	Annual
1,4-Dichloro- benzene	µg/L	15	75	Annual
Carbon tetrachloride	µg/L	0.5	5.0	Annual
Chloroethane	µg/L	80	400	Annual
Chloroform	µg/L	0.6	6.0	Annual
Chloromethane	µg/L	3.0	30	Annual
Methylene chloride	µg/L	0.5	5.0	Annual
1,1,1,2-Tetrachloro- ethane	µg/L	7.0	70	Annual
1,1,1,2,2-Tetrachloro- ethane	µg/L	0.02	0.2	Annual

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Tetrachloroethylene	µg/L	0.5	5.0	Annual
1,1,1-Trichloro- ethane	µg/L	40	200	Annual
1,1,2-Trichloro- ethane	µg/L	0.5	5.0	Annual
Trichloro- ethylene	µg/L	0.5	5.0	Annual
1,2,4-Trichloro- benzene	µg/L	14	70	Annual
Methyl ethyl ketone (MEK)	mg/L	0.8	4.0	Annual
Methyl isobutyl ketone (MIBK)	µg/L	50	500	Annual
Acetone	mg/L	1.8	9.0	Annual
Vinyl chloride	µg/L	0.02	0.2	Annual
Benzene	µg/L	0.5	5.0	Annual
Toluene	µg/L	160	800	Annual
Xylene	mg/L	0.4	2.0	Annual
Ethylbenzene	µg/L	140	700	Annual
Trimethylbenzenes	µg/L	96	480	Annual
Methyl tert-butyl ether (MTBE)	µg/L	12	60	Annual
PFAS	ng/L	*****	*****	Annual

#### 2.1.1.1 PFAS (Per- and Polyfluoroalkyl Substances) Monitoring

The permittee shall sample each monitoring well for the PFAS identified in the department's PFAS Update-Default Reporting List for Sampling and Analysis Requirements and Expectations (current version at the time of permit reissuance dated March 1, 2021).



### 3 Schedules

#### 3.1 Groundwater Data Evaluation

Required Action	Due Date
<p><b>Groundwater Data Evaluation:</b> When quarterly monitoring of groundwater monitoring wells is required due to exceedance of 50% of the enforcement standard for Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, at any of the downgradient wells [(MW-18 (803), MW-18A (804) &amp; MW-29 (809)], the permittee shall do an evaluation of the likely cause of the exceedance. The evaluation shall include review of discharge monitoring report (DMR) data. The permittee shall submit a letter to the Department that identifies the cause(s) of the exceedance &amp; what actions are being (or will be) taken to correct the problem &amp; the dates that the corrective action(s) were (or will be) taken.</p> <p>If effluent sample results exceed the limits applicable at Land Treatment Outfall 002, it will be considered a limit violation &amp; follow up will be through stepped enforcement. Responses could include notice of non-compliance (NON), notice of violation (NOV), referral to the Department of Justice or additional treatment depending on the frequency, severity &amp; duration of the violation.</p>	

#### 3.2 Monitoring Well Site Map

A detailed map of the monitoring well network is required in accordance with s. NR 141.065(2), Wis. Adm. Code.

Required Action	Due Date
<p><b>Monitoring Well Site Map:</b> Submit a map showing the precise locations of all monitoring wells. All monitoring well locations shall be included on a plan map drawn to scale. The map shall indicate structure boundaries, property boundaries, any nearby surface waters and a north arrow. The plan shall show the wells in relation to each other, to property and structure boundaries, and to a common reference point on a horizontal grid system. The origin of the grid system shall be located according to latitude and longitude or according to the state plane coordinate system. The exact vertical location of the top of the well casing shall be referenced to the nearest benchmark for the national geodetic survey datum to an accuracy of 0.01 feet. This plan map shall show the exact location of the installed well on a horizontal grid system which is accurate to within one foot. Direction of groundwater flow shall be indicated. In addition, an 8.5-inch by 11-inch site map drawn to scale according to the horizontal grid system shall be submitted showing the location of wells and structures on the site. The permittee shall accompany this map with the latitude and longitude coordinates of all monitoring wells.</p>	10/31/2023

## 4 Standard Requirements

**NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers):** The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

### 4.1 Reporting and Monitoring Requirements

#### 4.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

#### 4.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

#### 4.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

#### **4.1.4 Reporting of Monitoring Results**

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD5 and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a "0" (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.
- If no discharge occurs through an outfall, flow related parameters (e.g. flow rate, hydraulic application rate, volume, etc.) should be reported as "0" (zero) at the required sample frequency specified for the outfall. For example: if the sample frequency is daily, "0" would be reported for any day during the month that no discharge occurred.

#### **4.1.5 Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

#### **4.1.6 Other Information**

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

#### **4.1.7 Reporting Requirements – Alterations or Additions**

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

### **4.2 System Operating Requirements**

#### 4.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

**NOTE:** Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

#### 4.2.2 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

#### 4.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

#### **4.2.4 Controlled Diversions**

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

#### **4.2.5 Proper Operation and Maintenance**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

#### **4.2.6 Operator Certification**

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

#### **4.2.7 Spill Reporting**

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

#### **4.2.8 Planned Changes**

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

#### 4.2.9 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

### 4.3 Land Treatment Requirements for Industrial Discharges

**NR 214, Wisconsin Administrative Code:** The requirements of this section are based on ss. NR 214.12-16, Wis. Adm. Code, and apply to wastewater discharges to designed and constructed absorption pond, ridge & furrow, spray irrigation, overland flow and subsurface absorption treatment systems.

#### 4.3.1 Formulas for Land Treatment Calculations

The permittee shall use the following formulas for land treatment calculations, unless an alternate calculation method is approved by the Department in the Land Treatment Management Plan.

##### 4.3.1.1 Monthly Average Hydraulic Application Rate

Determine the monthly average hydraulic application rate (in gal/acre/day) for each outfall by calculating the total gallons of wastewater applied onto the site for the month, dividing that total by the number of wetted acres loaded during the month, and then dividing this resulting value by the number of days in the month. Enter this calculated monthly value on the Discharge Monitoring Report form in the box for the last day of the month, in the "Hydraulic Application Rate" column.

##### 4.3.1.2 Annual Total Nitrogen per Cell or per Zone

$$\frac{(\text{annual ave. concentration in mg/L}) (\text{tot. annual flow in million gallons per cell or zone}) (8.34)}{\text{acreage of cell or zone}} = \text{lbs/ac/yr}$$

##### 4.3.1.3 Annual Total Chloride per Cell or per Zone

$$\frac{(\text{annual ave. concentration in mg/L}) (\text{tot. annual flow in million gallons per cell or zone}) (8.34)}{\text{acreage of cell or zone}} = \text{lbs/ac/yr}$$

#### 4.3.2 Land Treatment Annual Report

Annual Land Treatment Reports are due by January 31<sup>st</sup> of each year for the previous calendar year.

#### 4.3.3 Chloride Requirements for Land Treatment Systems

Since chloride is not significantly treated by the soil, the chloride level of the wastewater treated on land shall be minimized to the extent that is technically and economically feasible. The goal is to protect groundwater quality and prevent exceedance of the 125 mg/L groundwater preventive action limit.

#### 4.3.4 Nitrogen Loading Requirements for Absorption Ponds

Since all forms of nitrogen in wastewater can be converted to nitrate nitrogen in the groundwater in the vicinity of an absorption pond, the average concentration of the sum of all nitrogen species in the absorption pond discharge shall be limited to minimize the concentration of nitrate+nitrite nitrogen in the groundwater to the extent that is technically and economically feasible and will prevent exceedance of the 2 mg/L groundwater preventive action limit.

#### 4.3.5 Absorption Pond Discharge Restrictions

The volume of discharge to the absorption pond system shall be limited so that the discharge volume combined with the precipitation from a 10-year frequency, 24-hour duration rainfall event does not reduce the available freeboard to less than 1 foot below the top of the dike.

#### **4.3.6 Discharges to the Absorption Pond System**

No discharge to the absorption pond system may have physical or chemical characteristics which prevent the proper operation of the system.

#### **4.3.7 Absorption Pond Management Plan**

The absorption pond treatment system shall be operated and managed in accordance with a Department approved management plan. The management plan shall be consistent with the conditions listed in this permit and s. NR 214.12(5), Wis. Adm. Code which requires a load/rest schedule, weed control and removal, etc. If operational changes are needed, the management plan shall be amended by submitting a written request to the Department for approval.

### **4.4 Groundwater Standard Requirements**

#### **4.4.1 Application of NR 140 to Substances Discharged**

This permit does not authorize the permittee to discharge any substance in a concentration which would cause an applicable groundwater standard of ch. NR 140, Wis. Adm. Code, to be exceeded. The Department may seek a response under NR 140 if the permittee's discharge causes exceedance of an applicable groundwater standard for any substance, including substances not specifically limited or monitored under this permit.

#### **4.4.2 Groundwater Sampling**

Groundwater sampling shall be performed in accordance with procedures contained in the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96).

#### **4.4.3 Indicator Parameter - Preventive Action Limits**

Preventive action limits for indicator parameters are calculated using a minimum of eight sample analysis results available from a representative background well in accordance with the procedures in s. NR 140.20, Wis. Adm. Code.

#### **4.4.4 Groundwater Monitoring Forms**

Results of the groundwater analyses shall be summarized and reported on Groundwater Monitoring Forms. This report form is to be returned to the Department no later than the date indicated on the form. A copy of the groundwater monitoring form or an electronic file of the form shall be retained by the permittee. Groundwater monitoring results shall be reported on an electronic groundwater monitoring form and certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

#### **4.4.5 Appropriate Formulas for Groundwater**

Total Nitrogen = Total Kjeldahl Nitrogen (mg/L) + [NO<sub>2</sub> + NO<sub>3</sub>] Nitrogen (mg/L)

Organic Nitrogen (mg/L) = Total Kjeldahl Nitrogen (mg/L) - Ammonia Nitrogen (mg/L)

#### **4.4.6 Reporting Depth to Groundwater**

Depth to groundwater shall be reported in feet, to the nearest 0.01 foot, below the top of the well casing. A report shall be on file with the Department stating the well casing top elevation in feet above mean sea level (MSL), to the nearest 0.01 foot, for each groundwater monitoring well.

#### **4.4.7 Groundwater Elevation**

Groundwater elevations shall be calculated by subtracting the depth to groundwater measurement from the well casing top elevation and shall be reported in feet above mean sea level (MSL) to the nearest 0.01 foot.

#### **4.4.8 Groundwater Grab Samples**

Grab samples shall be taken of the groundwater only after adequate removal or purging of standing water within the well casing has been performed. For those wells which will refill with water as fast as the water can be removed by bailing or pumping, four well volumes shall be removed prior to sample collection and analysis. For those wells which will not refill with water as fast as the water can be removed by bailing or pumping, the existing volume of water inside the well casing shall be removed and samples collected after the well has refilled to at least half the original volume in the well.

#### **4.4.9 Filtering of Groundwater Samples**

All groundwater monitoring well samples shall be filtered prior to analysis, except for the portion used to measure pH or field specific conductance, which shall be done using an unfiltered sample. While in-field analysis is preferred for these two tests, laboratory analysis done within two hours of sample collection is acceptable. For the portion to be filtered, it is preferred that filtering be performed in the field immediately following sample collection. However, laboratory filtering is acceptable. Filtering shall be performed through a standard 0.45 micron filter.

#### **4.4.10 Groundwater Data Log**

A data log shall be used to record the results of all field sampling and analysis events. This log shall include date of sampling event, groundwater sampler's name, well identification, depth from pipetop to water, depth from pipetop to well bottom, time of purging (start to end), volume of water purged, indication of whether the well was purged dry, time of sample withdrawal, and the following applicable field observations: pH, field conductivity, temperature, color, odor and turbidity, indication of whether field filtering was performed and time of filtering, indication of cap and lock replaced, and comments.

#### **4.4.11 Notification of Attaining or Exceeding Groundwater Quality Standards**

The permittee shall notify the Department when monitoring results indicate that a Preventive Action Limit or Enforcement Standard has been attained or exceeded. This notification may be provided in the general remarks section of the groundwater monitoring form or by letter attached to the groundwater monitoring form. Any values reported as exceeding a groundwater standard shall be confirmed as being from a representative sample and as a correct laboratory analysis result.

#### **4.4.12 Preventive Action Limit (PAL) Exceedance**

Analysis results (from the land treatment monitoring wells) that are less than this permit's PALs indicate that operation of the land treatment system is protective of groundwater quality. Substance concentrations that exhibit a trend over time of being greater than the PAL may indicate that additional technically and economically feasible actions are needed to reduce the discharge of the substance to the groundwater. In such a case, the Department may request an evaluation and response or propose a permit modification to require submittal of a groundwater evaluation report and implementation of a feasible response as specified in NR 140.24(1)(b), Wis. Adm. Code.

#### **4.4.13 Enforcement Standard Exceedance Within the Design Management Zone**



Substance concentrations greater than this permit's enforcement standard (ES) in a permittee's monitoring well located within the property boundary and within the design management zone of the land treatment system may indicate that the groundwater concentration exceeds an ES outside of these boundaries. If the Department determines there is reasonable evidence that an ES is being attained or exceeded beyond the property boundary or beyond the design management zone, the Department may request an evaluation and response or propose a permit modification to require an evaluation report and appropriate response as specified in s. NR 140.27, Wis. Adm. Code.

#### **4.4.14 Enforcement Standard Exceedance Outside the Design Management Zone**

The permittee's land treatment system shall not cause the concentration of a substance in groundwater to attain or exceed this permit's enforcement standard at any point of present groundwater use, at any point beyond the property boundary, or at any point beyond the design management zone established under s. NR 140.22, Wis. Adm. Code. When this condition is not met, **the permittee shall, within 120 days following notification by the Department of the attainment or exceedance of an ES beyond the compliance boundary, submit a groundwater quality evaluation and response report** as specified in NR 140.26(1)(b), Wis. Adm. Code. The Department may propose modification of this permit to require the permittee to implement additional treatment or other actions as specified in s. NR 140.26, Wis. Adm. Code.

## 5 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Groundwater Data Evaluation -Groundwater Data Evaluation	See Permit	6
Monitoring Well Site Map -Monitoring Well Site Map	October 31, 2023	6
Groundwater Monitoring Forms.	no later than the date indicated on the form	12
Annual Land Treatment Reports	by January 31st of each year for the previous calendar year	11
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	7

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

West Central Region, 1300 W. Clairemont Ave, Eau Claire, WI 54701